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REMARKS

Claims 1 through 17 are pending in the application.

Claim 1 has been amended to reflect that the inventive calendared films advantageously have widths of up to about 2010 mm. Support of this amendment can be found in the Application-as-filed, for example on Page 6, line 28 and original Claim 8.

Claim 1 has further been amended to reflect that the advantageous recited positive heat shrinkage of about 40 to 60 % is measured over a period of 15 minutes at a temperature of from 115 to 125 °C. Support for this amendment can be found in the Application-as-filed, for example on Page 3, line 30 to Page 4, line 2.

Claim 1 has additionally been amended to reflect that the stretching of the plastics film in the machine direction advantageously takes place at temperatures of from 180 to 60 °C. Support for this amendment can be found in the Application-as-filed, for example on Page 8, lines 27 through 28.

Claim 2 has been amended to reflect that the negative heat shrinkage of 0 to 10 % perpendicularly to the machine direction can beneficially be determined over a period of about 15 minutes at a temperature of from about 115 to 125 °C. Support of this amendment can be found in the Application-as-filed, for example on Page 4, lines 8 through 11.

The numbering of Claim 15 has been corrected. Applicants' Response to Restriction Requirement of April 4, 2006 erroneously listed Claim "5" in lieu of "15." Applicants' Representative respectfully regrets any inconvenience this oversight may have caused.

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Reexamination and reconsideration of this application, withdrawal of all rejections, and formal notification of the allowability of the pending claims are earnestly solicited in light of the remarks which follow.

The Claimed Invention is Patentable
In Light of the Art of Record

Claims 1 through 11, 13 and 16 stand rejected over Hughen et al (US 5,747,192) in view of Tyson (GB 11 86 531).

Claims 12, 14 and 17 stand rejected over Hughen in view of Tyson and further in view of Yoshiga et al (US 4,264,010),

The cited references do not teach or suggest the claimed invention.

Hughen et al disclose (col. 2, lines 43 - 67) a single ply label for dry cell batteries. The label is formed of a self-supporting, heat shrinkable, polymer film backing. The width of the film backing provides at its ends first and second opposed longitudinal edges and is sufficient for the backing to embrace the case of the battery. The length of the film backing is sufficient for the backing to extend beyond the length of the battery case. Suitable film backings include polypropylene and the like (col. 5, lines 51 - 54). The polymer film backing may further support a pigmented layer formed of alkali-resistant ink. (col. 6, lines 18 - 22).

Hughen thus does not teach or suggest the claimed invention.

Hughen more particularly fails to teach or suggest that the film is calendered. Hughen additionally fails to teach or suggest that the film is a rigid polyvinyl chloride film, as further recited in the claimed invention.

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And there is most certainly no teaching in Hughen of a calendered plastics film composed of rigid polyvinyl chloride having a width up to about 2010 mm, as recited in Claim 1 as-amended.

Hughen, silent with regard to the stretching temperatures, additionally fails to teach or suggest the inventive films which are calendered from 180 to 60 °C in the machine direction.

Applicants respectfully submit that the claimed invention as recited in claim 1 as-amended is clearly patentable in light of Hughen. Hughen does not teach or suggest the claimed film being a calendered, rigid polyvinyl chloride film having a width up to 2010 mm, and being stretched at temperatures from about 180 ° to 60 °C. Hughen, directed to a single ply label formed of a film backing with the same dimensions as the label, does not represent the calendered rigid polyvinyl chloride film of the claimed invention.

Furthermore, in contrast to the opinion urged within the Office Action, Hughen does not disclose a plastics film composed of rigid polyvinyl chloride film as backing film. Hughen instead discloses a number of suitable polymers for use in its backing film, including polypropylene and the like.

Nor does Hughen disclose a negative shrinkage of up to 10%, as further urged within the outstanding Office Action. Hughen discloses some shrinkage perpendicularly to the machine direction of the plastics film. Hughen specifically notes shrinkage in a direction normal to the axial direction (presumably the transverse direction) of from -2 to +5 %. A negative shrinkage means elongation (col. 5, lines 32 to 36). Accordingly, Hughen does not disclose a negative shrinkage of up to 10 %, as recited in Claim 2. Hughen instead merely teaches a negative shrinkage up to 2 %. In fact, Hughen considered as a whole teaches away from the beneficial embodiments of Claim 2 teaching a preference for positive transverse shrinkage, particularly a positive shrinkage of up to +5 % in the transverse direction.

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Applicants further make of record that Huguen does not teach or suggest at which temperatures and over which periods the positive and negative shrinkages of the plastics films are measured, so that a comparison of a positive heat shrinkage of from about 40 to 60 % in the machine direction with the same range of 40 to 60 % as claimed in Claim 1, is not possible, because it is not known whether Huguen has measured the positive shrinkage at the same temperature from 115 to 125 °C and over the identical period of 15 minutes, as recited in the claims as-amended.

Accordingly, Applicants respectfully submit that the claimed invention is patentable in light of Huguen, considered either alone or in combination with the remaining art of record.

Tyson does not cure the deficiencies in Huguen.

Tyson discloses a method for covering furniture, other articles or parts of articles by heat-shrinking thereon a heat-shrinkable material (page 1, lines 10 through 20) obtained from a laminate. The laminate comprises a layer of a non-woven fabric consisting of a fleece of partially drawn monofilaments of a thermoplastic polymeric material bonded together with a thermoplastic binder, and a layer of flexible thermoplastic orientable material, which may comprise, for example, polypropylene and may be prepared by any desired method, for example casting (page 1, lines 40 to 48). There is no indication in Tyson that the orientable layer is a rigid layer.

The laminate in the form of a flat sheet, before deformation, may be stretched at a temperature as low as 110 °C. The heat shrinkage treatment for the resulting laminate is then carried out at a temperature of 70 °C (page 2, lines 59 to 64). The example illustrating Tyson's invention (page 2, lines 65 to 92), merely discloses a biaxial stretching ratio of 1.5 : 1 in both directions and a shrink-back property of 10 to 15 % in each of the two directions.

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Tyson, disclosing heat shrinkage at 70 °C, thus does not teach or suggest the inventive rigid polyvinyl chloride films having a positive heat shrinkage at a temperature of 115 to 125 °C, as recited in Claim 1 as-amended. And Tyson, whose example discloses a maximum of 15% shrinkage in either direction, most certainly fails to teach or suggest the recited 40 to 60 % positive heat shrinkage.

Nor does Tyson teach or suggest calendered plastics film composed of rigid polyvinyl chloride having a width up to about 2010 mm as further recited in Claim 1 as-amended.

Accordingly, Applicants respectfully submit that the claimed invention is patentable in light of Tyson, considered either alone or in combination with the remaining art of record.

There would have been no motivation to have combined Huguen and Tyson. Huguen is directed to single ply labels. Tyson is directed to a method for covering furniture. These are altogether different fields of endeavor and problems solved, to say the least.

Furthermore, there would have been no motivation for the combination because the films of Tyson would render Huguen unfit for their intended purpose. More specifically, Applicants respectfully submit that Tyson's shrink-back property of 10 to 15 % would be too small for the use as the single ply label in Huguen. Thus it would not have been obvious to a person of ordinary skill in the art at the time of applicant's invention was made, to have provided a calendered film with Tyson's positive heat shrinkages of 10 to 15 % in both directions, as the heat shrink film of Huguen.

Applicants respectfully submit that the Office Action is instead indulging in impermissible hindsight by merely picking and choosing elements from the prior art while using the instant specification as the guide for that selection process.

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However, even if Applicants had combined Huguen and Tyson (which they did not), the claimed invention would not have resulted.

In particular, the combination would not have resulted in the claimed calendered, rigid polyvinyl chloride films having a 40 to 60% positive heat shrinkage at a temperature of 115 to 125 °C, as recited in Claim 1 as-amended.

Nor does the combination teach or suggest such calendered plastics film composed of rigid polyvinyl chloride having a width up to about 2010 mm as further recited in Claim 1 as-amended.

Accordingly, Applicants respectfully submit that Claims 1 through 11, 13 and 16 are patentable in light of Huguen and Tyson, considered either alone or in combination.

Claims 12, 14 and 17 are likewise patentable over the foregoing references in view of Yoshiga.

In contrast to the moderate shrink films of the invention, Yoshiga is directed to film which is required to shrink more than 60 % (Abstract, col. 1, lines 39 to 42). In fact, the films of Yoshiga may shrink more than 80 %, if the film has been stretched at a total of stretch ratio in the longitudinal direction and transverse direction of 5.5 to 7.0 times. Yoshiga merely generically notes that its films may have "excellent" optical characteristics (col. 2, line 54).

Yoshiga, requiring its films to have a greater shrink than 60 %, does not teach or suggest the moderate shrink films recited in Claims 12, 14 and 17.

Yoshiga, generically noting excellent optical characteristics, further fails to teach or suggest the inventive glass-clear films, recited in Claim 12.

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And Yoshiga most certainly does not teach or suggest applying a protective covering film composed of rigid polyvinyl chloride to the upper side of the inventive films, as recited in Claim 17.

Applicants respectfully reiterate that there would have been no motivation to have combined Hughen, Tyson and Yoshiga. Hughen is directed to single ply labels. Tyson is directed to a method for covering furniture. Yoshiga is directed to films whose composition and process conditions are chosen to impart greater than 60% shrinkage. These are altogether different fields of endeavor and problems solved, to say the least.

However, even if combined (which Applicants did not) the Claims 12, 14 and 17 would not have resulted.

The combination more particularly fails to teach or suggest the moderate shrink films recited in Claims 12, 14 and 17. In fact, Yoshiga teaches away from such films by instead requiring greater than 60% shrinkage in its films.

Nor does the combination teach or suggest the inventive glass-clear films recited in Claim 12.

And the combination most certainly does not teach or suggest applying a protective covering film composed of rigid polyvinyl chloride to the upper side of the inventive films, as recited in Claim 17. In fact, Hughen, directed to single ply shrink films, clearly teaches away from such advantageous multi-layered embodiments.

Accordingly, Applicants respectfully submit that Claims 12, 14 and 17 are likewise patentable over Hughen, Tyson and Yoshiga, considered either alone or in combination.

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CONCLUSION

It is respectfully submitted that Applicants have made a significant and important contribution to the art, which is neither disclosed nor suggested in the art. It is believed that all of pending Claims 1 through 17 are now in condition for immediate allowance. It is requested that the Examiner telephone the undersigned if any questions remain to expedite examination of this application.

It is not believed that extensions of time or fees are required, beyond those which may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time and/or fees are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required is hereby authorized to be charged to Deposit Account No. 50-2193.

Respectfully submitted,

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